

Coluccio, Tina (DEQ)

From: Conroy, Randy (DEQ)
Sent: Tuesday, May 29, 2012 1:59 PM
To: Coluccio, Tina (DEQ)
Subject: FW: Kennecott Humboldt Mill Septic Denial etc.
Attachments: HumMillStatus5-24-12.pdf

Please file the email and attachment in the Kennecott Humboldt file. Thanks

Randy Conroy
UP District Geologist
Water Resources Div - MDEQ
conroyr@michigan.gov

phone 906-346-8527
fax 906-346-4480
420 5th Street
Gwinn, MI 49841

-----Original Message-----

From: Patrick Jacuzzo [<mailto:PJacuzzo@mqtcty.org>]
Sent: Thursday, May 24, 2012 2:51 PM
To: Wolfe, Rob (DEQ)
Cc: Conroy, Randy (DEQ); Fred Benzie
Subject: Kennecott Humboldt Mill Septic Denial etc.

Hi Rob:

We conducted a soil evaluation for a proposed commercial on-site subsurface sewage disposal system at the Humboldt Mill location for Rio Tinto / Kennecott yesterday, May 23, 2012. The site did not meet the Criteria and will require a variance to proceed.

The site is divided into three parcels. One parcel contains the mill structures, one parcel contains the drainfield and well areas and the final parcel contains land surrounding. The parcel in which the drainfield and well are proposed is 3.99 acres in size and is USDA soil mapping unit 64, Mines and dumps. The remaining parcels are primarily steep bedrock outcrops and ponded water.

The test holes revealed extremely compact fill materials comprised of granitic mine tailings with some very large boulders in the primary drainfield area. The replacement area test hole revealed mine tailings, timbers and rail ties with water table at approximately 6 feet. We were prohibited from entering and were not permitted to approach to within 10 feet of the test holes due to facility safety rules. Soils are very compacted, predominantly large chunks of rock and are not suitable for infiltration. As such the site was denied.

Kennecott has been instructed to submit an engineering proposal for a variance. I have attached the file letters regarding the septic site evaluation and the Type II water supply application. The site maps did not .pdf well.

Just keeping you informed as you will need to be involved in this variance process.

Also, if I recall correctly, I believe I was informed that Randy Conroy had issued a permit for a process water treatment facility.. The location of this process water treatment facility was not indicated on the site plan provided to me for the domestic equivalent sewage permit and Type II water application. Based on the limitations of the site, I have concerns regarding how this will be laid out. I believe it is important that we coordinate with this regard.

Let me know if you would like to meet and review this file information.

Patrick L. Jacuzzo, MS, REHS
Director of Environmental Health
Marquette County Health Department
184 US 41 East
Negaunee, MI 49866
(906) 475-4195
(906) 475-6500 Fax



Marquette County Health Department

184 U.S. 41 EAST • NEGAUNEE, MI 49866-9671
PHONE: (906) 475-9977 • FAX: (906) 475-9312 • WWW.MQTHEALTH.ORG
FRED J. BENZIE, M.P.H., M.P.A., R.S., HEALTH OFFICER



May 24, 2012

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MISSION

To serve people
by providing
leadership in
assessing,
promoting and
assuring good
health within
our community.



Public Health
Prevent. Promote. Protect.

Kristen Mariuzza
Environmental and Permitting Manager
Rio Tinto/Kennecott Eagle Minerals
504 Spruce St.
Ishpeming, MI 49849

RE: Permit site evaluation and engineering plan review for proposed Type II non-transient, non-community public water supply and industrial non-potable water supply wells.

Location: Humboldt Mill
4547 County Road 601
Champion, MI 49814
Humboldt Township, SE 1/4, T47N, R29W, Sec.11
Parcels: 52-06-211-001-20, Mill Buildings
52-06-211-003-10, Drainfield and well area
52-06-211-003-00, Surrounding Parcel

Dear Ms. Mariuzza:

This department has reviewed the permit application and plans submitted by you on May 15, 2012, for the proposed construction of a Type II B non-transient, non-community public water supply well to serve a proposed ore processing facility and associated office space at the above stated location.

Base on a preliminary review of the information submitted, the following items, as discussed by e-mail on May 21, 2012, must be addressed prior to permit issuance:


- The plan indicates two wellheads to be located on this parcel. One wellhead is titled "Domestic" and the other "Freshwater". The Freshwater well appears to be intended for industrial processing use. This department has not received a permit application for an industrial use well associated with this parcel. Please submit an industrial well permit application for the Freshwater well with the associated fee of \$406.00.
- The water supply plan must address the need to prohibit plumbing cross-connections between the potable supply piping and the non-potable supply piping. No physical connections shall exist between the potable and non-potable distribution piping and all piping shall be clearly labeled as "potable" or "non-potable".
- The plan appears to indicate storage tanks of some sort located east of the concentrator building and approximately 782 feet NW of the proposed well location. In addition, the UPPCO substation lies approximately 532 feet NNW of the proposed well location. Act 399 requires 800 feet of isolation to

potential major source contaminants. Please indicate what these facilities will contain with regard to potential contaminants (i.e. waste oil, cooling oil for transformers. etc).

- The combined use of both proposed wells will be 140-gpm pump capacity. This will require a large quantity withdrawal review by MDEQ. Please provide evidence of submission for review.
- The plan indicates the installation of a chlorinator. To install this system you will need to submit design specs to indicate that the system and all of its components meet NSF standards. In addition, you must apply for a permit for a water treatment system to be reviewed by this department in conjunction with the MDEQ. Upon approval to operate you will need to employ an S-5 level certified operator and conduct monthly operation reporting in accordance with Act 399 and MDEQ requirements. The water treatment application shall be submitted on the form provided to you in the May 22, 2012 e-mail correspondence, with the associated permit fee of \$497.

To expedite the permitting process, please provide additional information to address the above stated items. If you have questions, or require further assistance regarding this matter, please contact the undersigned.

Sincerely,



Patrick L. Jacuzzo, MS, REHS
Director of Environmental Health

cc: Fred J. Benzie, MPH, MPA, RS, Health Officer
Robert Wolfe, RS, MDEQ, Resource Management Division



Marquette County Health Department

184 U.S. 41 EAST • NEGAUNEE, MI 49866-9671
PHONE: (906) 475-9977 • FAX: (906) 475-9312 • WWW.MQTHEALTH.ORG
FRED J. BENZIE, M.P.H., M.P.A., R.S., HEALTH OFFICER



May 24, 2012

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MISSION

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Public Health
Prevent. Promote. Protect.

Kristen Mariuzza
Environmental and Permitting Manager
Rio Tinto/Kennecott Eagle Minerals
504 Spruce St.
Ishpeming, MI 49849

RE: Permit site evaluation and engineering plan review for proposed commercial sub-surface sewage disposal system.

Location: Humboldt Mill
4547 County Road 601
Champion, MI 49814
Humboldt Township, SE 1/4, T47N, R29W, Sec.11
Parcels: 52-06-211-001-20, Mill Buildings
52-06-211-003-10, Drainfield and well area
52-06-211-003-00, Surrounding Parcel

Dear Ms. Mariuzza:

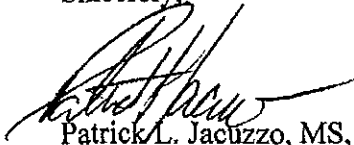
This department has reviewed the plans submitted by you on May 15, 2012, for the proposed construction of a commercial on-site subsurface sewage disposal system to treat domestic equivalent strength sewage generated from the proposed ore processing facility and offices proposed at the above stated location. Soil evaluations conducted by representatives of this department during a May 23, 2012 site visit found the site to be unsuitable for installation of a subsurface sewage disposal system as specified in your current design plan. Soils on the site consist of firmly compacted mining tailings and various fill materials that do not meet the permitting requirements of the Michigan Criteria for Subsurface Sewage Disposal, by authority of Act 368 P.A. 1978, as amended and Act 245, P.A. 1929, here forth referred to as the Criteria.

As such, this department is hereby denying your application to install an on-site subsurface sewage disposal system in accordance with Section III.B of the Criteria. To move forward with this project, you must pursue a variance in accordance with Section X of the Criteria by providing a written request for variance. The variance request shall state the method by which the site limitations will be addressed, along with engineered plans indicating a system design that will prove functional under current site limitations and will not compromise public health or the environment.

The variance request and associated engineered plan must then be reviewed by this department in conjunction with the Michigan Department of Environmental Quality (MDEQ), Resource Management Division. In accordance with Section X of the Criteria, the MDEQ, Resource Management Division must support the variance proposal prior to this department granting approval.

If you have questions, or require further assistance regarding this matter, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick L. Jacuzzo", written over a horizontal line.

Patrick L. Jacuzzo, MS, REHS
Director of Environmental Health

cc: Fred J. Benzie, MPH, MPA, RS, Health Officer
Robert Wolfe, RS, MDEQ, Resource Management Division

Marquette County Health Department • Site & Soils Evaluation

184 U.S. HIGHWAY 41 EAST • NEGAUNEE, MI • 49866-9671 • (906) 475-4195

Kennecott Eagle Minerals Co.
604 Spruce St.
Ishpeming, MI 49849

Site Evaluation Number SE-201210542
Sewage Permit Number: *N/A*
Excavating Contractor:

Property Location		Street Address of Project 4547 County Road 601		
Michigan Tax Id # 00520621100310		Subdivision		Lot #
Township Humboldt	T 47 N	R 29 W	Sec. 11	SW 1/4, NW 1/4, SE 1/4

USDA Soil Type: Pits and Dumps, mine
Seasonal High Water Table: 72
Bedrock Depth: >90
Parcel in Flood Plain ☐
Impervious Layer ☒

** UNABLE TO ENTER TEST HOLES OR TO APPROACH WITHIN 10 FEET OF THE TEST HOLE PER MINING SAFETY POLICY. TEST HOLE OBSERVATIONS ARE BASED ON EXCAVATION OBSERVATIONS AND EVALUATION OF SPOILS PILES.**

Depth (feet)	Test Hole #1 Soil Texture & Structure	Perc min/in	Water Table	Depth (feet)	Test Hole #2 Soil Texture & Structure	Perc min/in	Water Table	
1	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> MINING TAILINGS GRANITE ROCK LARGE BOULDERS SOME LOAMY SAND INTERSPERSED COMPACTED </div>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> DYS - ESTIMATED </div>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> NOT DETECTED </div>	1	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> MINING TAILINGS GRANITE ROCK LOAMY SAND, TIMBERS RAILROAD TIES. H₂O coming in Hole at approximately 6' </div>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> DYS - ESTIMATED </div>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> NOT DETECTED </div>	1. Parcel Size: Acres. 3.99
2				2. Slopes - area to be excavated 0-5%				
3				3. Surface water: Name: Unnamed ponding Distance: >100 feet Direction: South				
4				4. Owner advised - DEQ permit(s) may be required for: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Flood plain Filling <input type="checkbox"/> Wetland Filling				
5				5. Replacement area: <input type="checkbox"/> Proposed and replacement areas are the same. <input checked="" type="checkbox"/> See sketch for alternate location. <input type="checkbox"/> N/A - replacement area				
6				6. Replacement area soils: <input checked="" type="checkbox"/> See test hole 2 <input type="checkbox"/> Soils are expected to be consistent with Test Hole.				
7				7. Comments: Site is all compacted granitic mining tailings. Soils are unsuitable. Variance required with MDEQ support.				

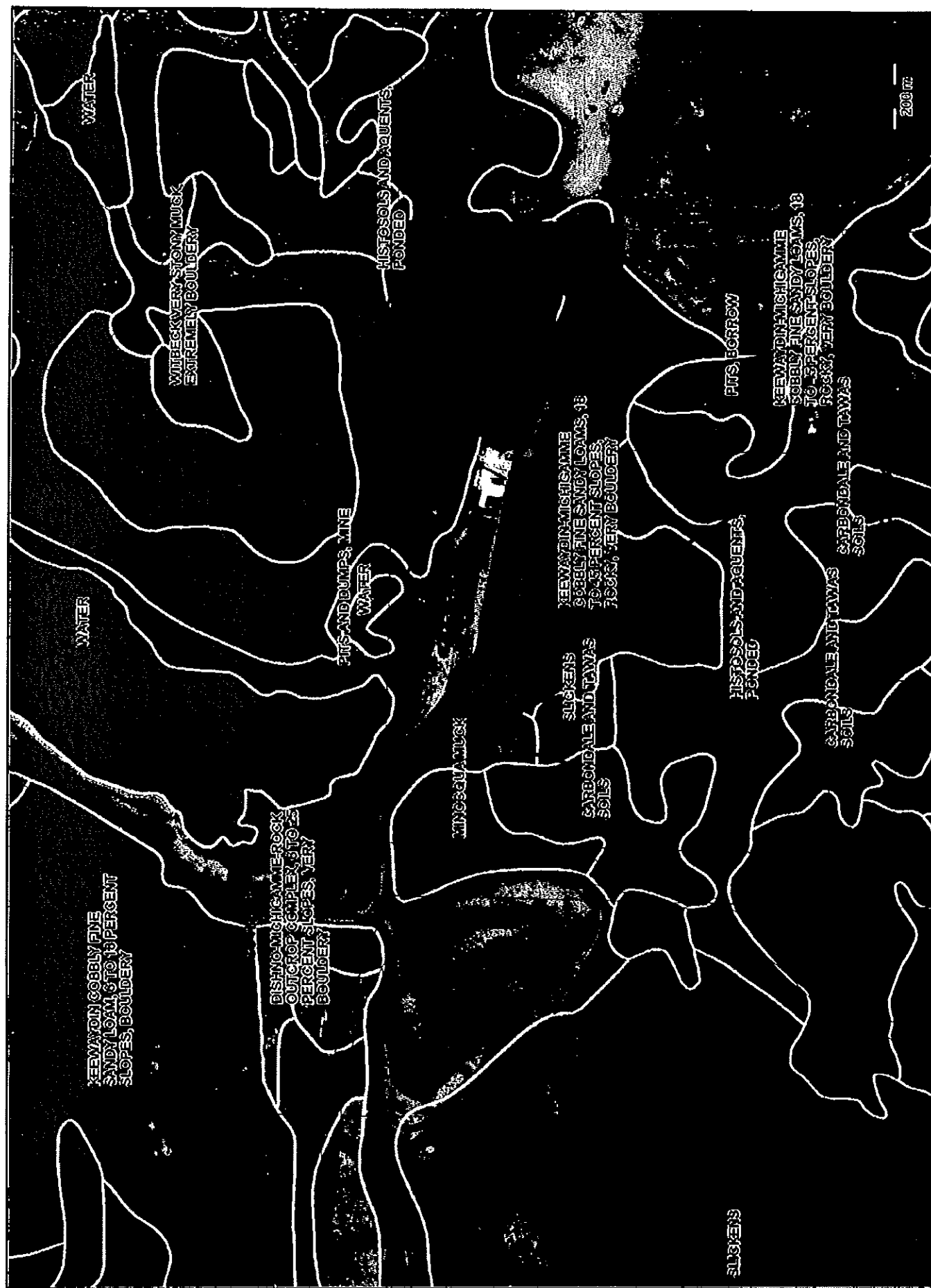
☐ Test Hole (Site) Meets Suitability Stds
☐ Special Const. Criteria-See Permit
☒ Test Hole (Site) Denied-See Comments

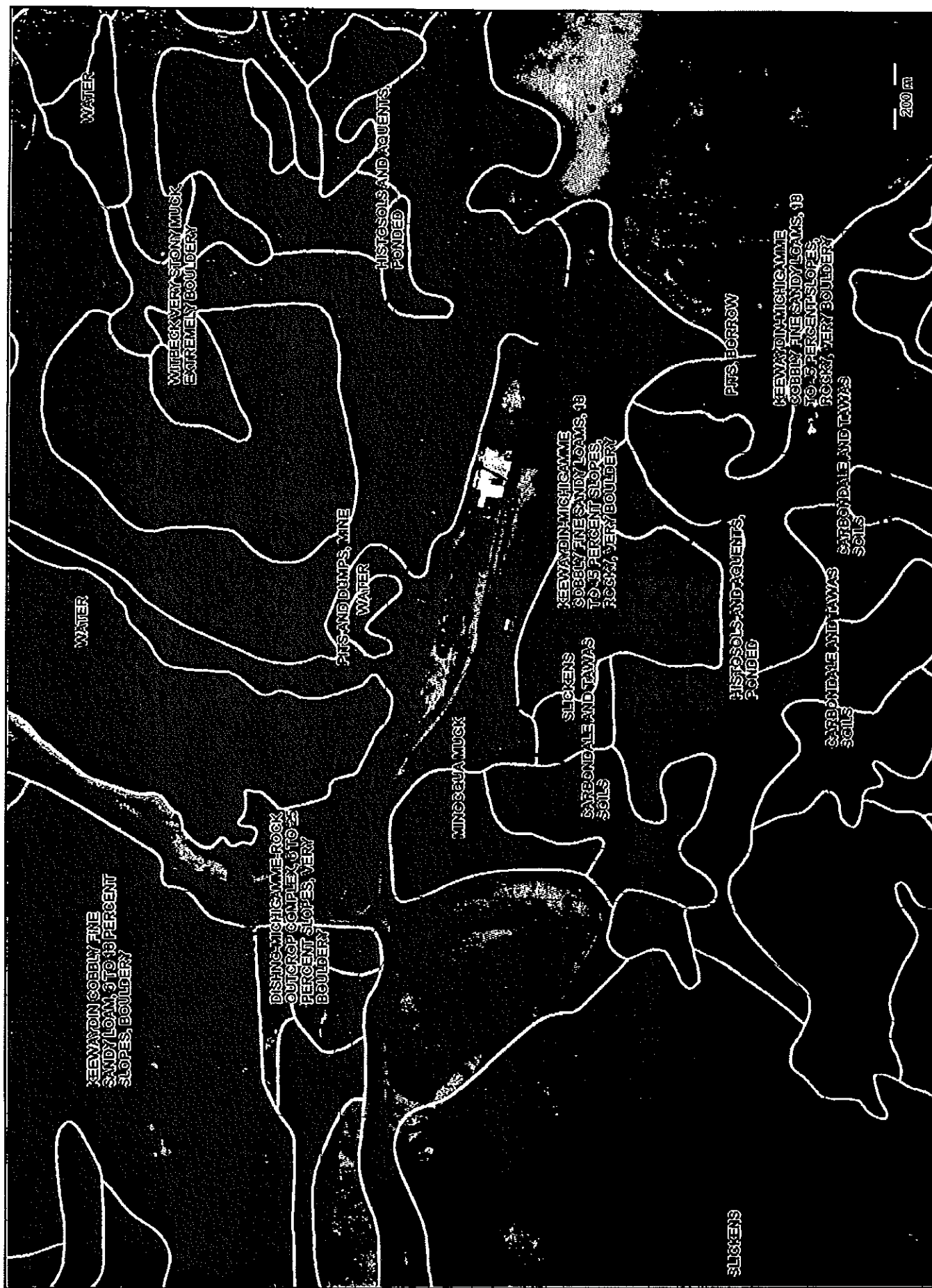
☐ Test Hole (Site) Meets Suitability Stds
☐ Special Const. Criteria-See Permit
☒ Test Hole (Site) Denied-See Comments

Report Evaluated By

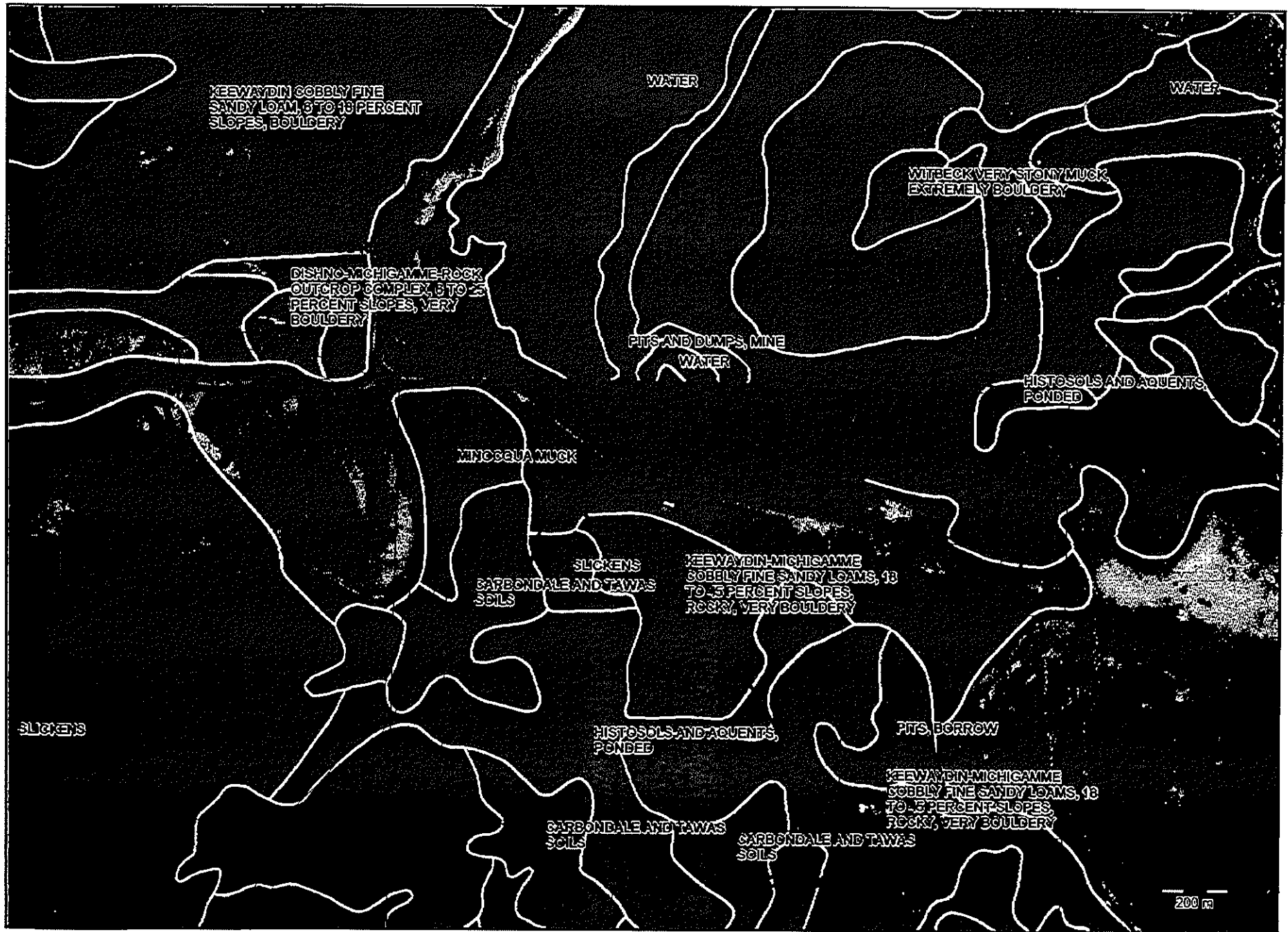
Date:

5/24/12





Kenecott Humboldt Mill Building 52-06-211-001-20



Approximate test hole
locations.

Humboldt Mill Site M-95 and 601



Map Unit Composition

Udorthents and similar soils: 30 to 55 percent
 Udipsamments and similar soils: 30 to 55 percent
 Dissimilar components: 10 to 15 percent

Components of Minor Extent

Dissimilar components:

- Areas of rock outcrop
- Somewhat poorly drained and poorly drained soils

Similar components:

- Undisturbed areas of Udorthents and Udipsamments

Use and Management

Land use: Urban land or idle areas

Management considerations:

- Onsite investigation is needed to determine the suitability for specific uses.

64—Pits and Dumps, mine

Setting

Landscape position: Nearly level to very steep areas at active and former mining locations

Shape of areas: Irregular or oval

Size of areas: 10 to 3,600 acres

Map Unit Composition

About 70 percent of this map unit consists of open pit iron mines. Currently, large active iron mines are in operation at the Tilden and Empire mines near National Mine and Palmer. Inactive mines, such as the Republic, Humboldt, and several smaller mines near Negaunee, Ishpeming, and Gwinn, also are included in this unit. Some of these areas remain idle and are revegetating naturally. Other areas are being revegetated through reclamation efforts. Some small areas of water are included.

About 20 percent of this map unit consists of made land. These areas include roads, parking lots, railroad tracks, buildings, and small manmade ponds.

About 10 percent of this map unit is rock outcrop.

Use and Management

Land use: Active and inactive iron mines

Management considerations:

- Onsite investigation is needed to determine the suitability for specific uses.

65B—Udorthents-Urban land complex, nearly level and gently sloping

Setting

Landscape position: Nearly level and gently sloping urban areas

Shape of areas: Irregular

Size of areas: 20 to 100 acres